

REMARKS/ARGUMENTS

Prior to this Amendment, claims 1-17, 33-36, 40, and 41 were pending in the application.

Claim 1 is amended to further clarify that the system determines more than one candidate reference record from a database using spatial and business data derived from transaction data, which allows imprecision in the transaction data to be overcome or addressed.

New claims 42-44 are added to further protect features of the invention not shown by the art of record. Support for these claims can be found at least in Applicants' specification in paragraphs [0023] to [0031]. No new matter is added.

After entry of the Amendment, claims 1-17, 33-36, and 40-44 remain for consideration by the Examiner.

Rejections under 35 U.S.C. 103

In the Office Action, claims 1-17, 33-36, 40, and 41 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. Appl. Publ. No. 2004/0199506 ("Shaffer") in view of U.S. Pat. No. 6,523,027 ("Underwood"). This rejection is respectfully traversed based on the following remarks.

In the past Amendments and the Attachment to Pre-Appeal Brief Request for Review, Applicants have pointed out that independent claim 33 differs from claim 1 in that it includes additional limitations relative to claim 1. To date, the Examiner has not provided a specific citation in Shaffer (which has been cited consistently through the prosecution of this application) or other references including Underwood for each limitation of this claim and has simply stated that claim 33 is rejected for the reasons provided for rejecting claim 1. This does not state a proper rejection under 35 U.S.C. §103. Therefore, to urge the review of all the limitations of claim 33, this claim is discussed first.

Claim 33 is directed to a method of identifying distribution channel participants. The following limitations are presented in claim 33 and were **not** previously presented in

claim 1: (a) “generating a transaction record comprising data that imprecisely identifies at least one channel participant”; (b) “geo-coding location data within the transaction record to determine a spatial identifier for the transaction record”; (c) “providing a reference record database comprising a plurality of reference records where each reference record comprises business information having greater precision than the transaction record and each record is associated with a spatial identifier”; and (d) “identifying more than one reference record...by matching the spatial identifier of the transaction record with spatial identifiers associated with reference records” (with emphasis added to indicate features Applicants have not been able to identify in Shaffer). A prima facie case of obviousness has not been presented in the Office Action with regard to claim 33 because a specific citation to Shaffer or Underwood for teaching each of these limitations of claim 33 is not provided. Further, the Examiner in any of the Office Actions has not even mentioned these limitations and hence, it is not clear these limitations of claim 33 have been properly considered by the Examiner. For these reasons, claim 33 is believed allowable over the combination of Shaffer and Underwood.

More particularly, Applicants have reviewed Shaffer and Underwood closely and have found no teaching of these limitations of claim 33. It may be useful to walk through each of these limitations and explain why they are not shown by either reference. First, the generating step of claim 33 calls for generating a transaction record “comprising data that imprecisely identifies at least one channel participant.” As noted on page 5 of the application at lines 15-19, “the present invention does not require that the customer name and/location information be entirely accurate or high precision. One feature of the present invention is an ability to compensate for common errors and deficiencies in the transaction record by improving resolution of the data.” Applicants’ Figure 2 shows some common errors in transaction records that cause generated records to imprecisely identify channel participants. For example, a name may be misspelled, a different name may be used, a different abbreviation used, or the like. Each of these may make it difficult to match the transaction record to a particular channel participant.

In contrast, the Shaffer works very differently. In the Shaffer model, location information and processing proceeds through a linkage key concept under the assumption that there is only one record that matches “request information.” Shaffer’s assumptions are also that the provided location information is accurate or precise and the algorithm uses indexes to locate the single matching (as indicated by the index) record in the database. The method of claim 33 is adapted to accommodate transaction records that include imprecise identification or ambiguity in an identifier for a channel participant. Underwood is not cited for teaching the generating step of claim 33. Hence, Applicants request that the rejection of claim 33 be withdrawn or a specific citation to Shaffer or Underwood be provided that shows generating a transaction record with data that imprecisely identifies at least one channel participant.

Second, the references fail to show geo-coding location data in the transaction record to obtain a spatial identifier for the transaction record. The closest citation in the Office Action may be to Shaffer at paragraphs [0061] and [0116] with regard to the rejection of claim 6. However, paragraph [0061] discusses using an identifier to match various types of data in a database, and paragraph [0116] discusses a merchant adding a “unique transaction identification string to the request.” There is no discussion of geo-coding location information in a transaction record to create a spatial identifier for that transaction record, which is useful for later matching of candidate matching records for the imprecisely defined channel participant. Hence, Shaffer fails to teach this step of the method of claim 33, and Underwood does not overcome this deficiency (and is not cited for doing so).

Third, the references fail to show the step of “providing a reference record database comprising a plurality of reference records where each reference record comprises business information having greater precision than the transaction record and each record is associated with a spatial identifier.” Applicants could not find teaching of this step in Shaffer or Underwood. Therefore, Applicants request that the Examiner provide a specific citation to Shaffer or Underwood of a database with reference records having business information with “greater precision” than the transaction record that that each such record is associated with a spatial identifier.

Fourth, the references do not show the step of “identifying more than one reference record...by matching the spatial identifier of the transaction record with spatial identifiers associated with reference records”. The Office Action asserts that Shaffer teaches a matching mechanism as claimed in claim 1 at paragraphs [0061], [0064], and [0149]. However, there is no discussion in these paragraphs of identifying “more than one reference record.” As discussed above, Shaffer is not addressing ambiguities and, instead, is a precise matching algorithm that is based on indexes that have a single match. Additionally, there is no teaching in Shaffer that the identifying of more records shall be done by matching a spatial identifier generated for a transaction record with those associated with reference records. Underwood is cited at paragraphs [3078], [3613], and [3619] in the rejection of claim 1. These citations do not provide column and line numbers to this issued patent, and Applicants request more specific citations to this reference (nor do they point to particular components within the Underwood system).

However, Applicants’ review of Underwood did not show the identifying step of claim 33 and Applicants did not see a mention of matching of more than one record using spatial identifiers. Underwood is directed to “Interfacing Servers in a JAVA Based E-Commerce Architecture” and does not appear to have any relevance at all to the teaching of Shaffer (e.g., where is the motivation to combine?) or to Applicants’ invention (e.g., are more than one servers selected or identified using spatial identifiers?). For these reasons, Applicants request that the rejection of claim 33 based on Shaffer and Underwood be withdrawn, and claim 33 and claims 34-36, which depend from claim 33, be allowed.

Turning now to claim 1, this claim calls for, among other things, transaction data related to a channel participant. Applicants maintain that Schaffer does not show transaction data. As discussed in the prior response, the Office Action states that the linkage key contains the ability to process transactions. However, “containing the ability” to perform a claim limitation is not a proper standard under 35 U.S.C. 102. Moreover, the linkage key does not relate to any particular transaction. The linkage key is provided explicitly by a customer or derived from information provided by a customer,

and does not come from a transaction nor is it related to a transaction. The Examiner has never addressed these comments in any of the Office Actions to date. The Office Action cites Shaffer at paragraphs [0061] and [0116] for this limitation of claim 1. However, paragraph [0061] discusses a merchant can be provided with “median income data, property value data, census data, business and government location data, and other data related to the spatial location of the consumer.” Paragraph [0116] discusses an identification string. None of this information teaches “transaction data related to at least one channel participant” (e.g., see Figure 2 for examples of transaction data). For this reason alone, claim 1 is not shown by Shaffer, and Underwood is not cited for overcoming this deficiency.

Further, claim 1 calls for a candidate identification mechanism for “determining more than one candidate reference record from one of the reference record databases using spatial and business data derived from the transaction data.” Shaffer fails to show such a candidate identification mechanism. The Office Action agrees that Shaffer does not show this mechanism, but it cites Underwood at paragraphs [3078], [3613], and [3619]. Again, these references do not appear to provide a citation that is useful because it is not in column and line format as is typical for an issued patent, and Applicants request a more specific citation (i.e., what is the “mechanism” being cited in Underwood? The flow charts in Figs. 1B and 1C show choosing one code or on record set not determining more than one candidate.).

Applicants’ review of Underwood failed to show any suggestion that it teaches a mechanism for determining more than candidate reference record using “spatial and business data derived from the transaction data.” Applicants did not find any component in Underwood that generated a set of candidates let alone candidate records. Specifically, Applicants are unclear what would be considered “transaction data” in Underwood, and particularly, what could be construed as transaction data that would provide both spatial and business data. Then, Applicants could find no teaching of using such data to identify more than one candidate record. Again, Underwood is directed toward problems associated with interfacing servers and not how to resolve ambiguities associated with transaction records, and as a result, it is unlikely that

Underwood would provide any relevant teaching to the system of claim 1 or that even if it did that one skilled in the art would be motivated by reading it or Shaffer to modify the teaching of Shaffer (i.e., where is the motivation to combine?). As a result, Applicants request that specific citations be provided or that this rejection be withdrawn as unsupported because it does not appear that Underwood overcomes the deficiencies in Shaffer.

As discussed in a prior response, Shaffer does not entertain the concept of more than one candidate record. Shaffer teaches that an identifier will unambiguously point to a single, specific database record in any given database. In fact, Shaffer's system would fail if the identifier pointed to more than one record. One example of where Shaffer's method would fail is multiple businesses residing at the same address (such as in the same office building). In this case each business would have the same spatial identifier (and hence be ambiguous) until subsequent lexical or other non-spatial matching techniques were applied.

In contrast, the invention of claim 1 recognizes that in real-world situations transaction data is often ambiguous. The invention of claim 1 allows for identification of more than one candidate record. The matching mechanism is then used to match a subset of the candidate records (e.g., one candidate record) to the transaction data. Shaffer and Underwood do not need to use matching mechanism for this purpose and if their teaching is combined the system of claim 1 is not achieved.

Claims 2-17, 40, and 41 that depend from claim 1 are allowable for at least the same reasons as claim 1 as well as the individual limitations presented in those dependent claims. Further, Shaffer does not show or suggest lexical matching as called for in claims 13-15. Shaffer is cited again at paragraphs [0061] and [0116] for teaching the claimed lexical matching. However, the cited portions of Shaffer et al. have nothing to do with lexical matching. Paragraph [0061] discusses providing a set of data to a merchant server and paragraph [0116] discusses an identification string to a requested image. Clearly, neither of these paragraphs teaches nor even suggests the lexical matching of claims 13-15. Also, the cited portions of Shaffer do not show or suggest

any selection process as called for in claims 16-17 (i.e., paragraph [0120] discusses the identifier string and cookie data files and nothing about lexical matching and a selection process based on lexical matching and corresponding scores; paragraph [0122] discusses consumer telephone numbers and income levels; and paragraph [0182] discusses geodemographic systems). Hence, claims 13-17 are believed allowable over Shaffer and Underwood for these additional reasons.

With respect to claims 40 and 41, these claims call for the use of a learning database to create associations between transaction records and reference records that were not automatically matched. Underwood is cited for teaching learning libraries – however, the Examiner again cited paragraph numbers that are not shown in the Underwood patent (which shows column numbers and line numbers) and Applicants are not clear what is being cited. Regardless, Applicants did not identify learning libraries in Underwood, and clearly, Underwood does not show learning libraries that are “operable to hold records that create associations between information within transaction records that could not be automatically matched with reference records and the desired reference record.” In other words, a proper reference would need to not only show a learning library but the specific type of learning library called for in claims 40 and 41 (with claim 41 requiring manual intervention to create the association of claim 40). Accordingly, claims 40 and 41 are allowable not only for the reasons stated in reference to claim 1, but also because Shaffer and Underwood do not teach their additional limitations.

Conclusion

In view of all of the above, the claims are now believed to be allowable, and it is requested that a timely Notice of Allowance be issued in this case. Any fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

Respectfully submitted,

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